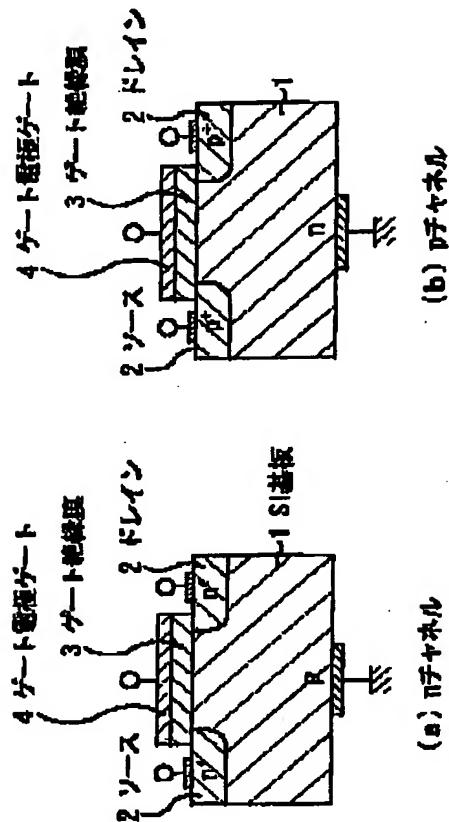


EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2001203382
 PUBLICATION DATE : 27-07-01
 APPLICATION DATE : 21-01-00
 APPLICATION NUMBER : 2000013275
 APPLICANT : FUJITSU LTD;
 INVENTOR : SAKUMA YOSHIKI;
 INT.CL. : H01L 33/00 C09K 11/08 // H05B 33/14
 H05B 33/26
 TITLE : SEMICONDUCTOR DEVICE



Si-MIS型発光素子

ABSTRACT : PROBLEM TO BE SOLVED: To obtain a semiconductor device exhibiting excellent compatibility with the structure of conventional Si-MOS transistor and applicable to optical interconnect in which high emission efficiency can be attained easily and surely.

SOLUTION: An MIS type light emitting element is constituted similarly to an MIS type (MOS type) transistor. A gate insulation film 3 is formed by adding a light emitting substance, e.g. a semiconductor nanocrystal of Si, SiGe or Ge, polycrystal or microcrystal of a direct transition semiconductor, a rare earth element of Er or Eu, or a fluorescent substance of ZnS:Mn, or the like. Light is emitted from the gate insulation film 3 by applying a specified voltage to the source/drain 2 and a specified bias to the gate electrode 4.

COPYRIGHT: (C)2001,JPO

BEST AVAILABLE COPY